sources with the objective of supplementing the energy requirement in different parts of the country including the forest covered areas. Among, various non-conventional energy sources, in the forest areas use of biogas, biomass gasifier and some of the decentralized solar energy systems such as solar lantern, solar home lighting, solar street lighting, solar cooker etc. are expected to reduce the demand for fuelwood and contribute to protection of forests.

(c) During the last three years a total number of 1000 solar home lighting systems, 910 street lights and 1406 solar cookers have been installed in Himachal Pradesh.

(d) and (e) During 2006-07, a total amount of Rs. 90.25 crores has been earmarked for the solar energy programmes. In addition, some amount may also be spent from the funds allocated for the remote village electrification programme on solar energy projects.

Bio-fuel as alternate energy

†1815. SHRI DILIP SINGH JUDEV: Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:

(a) the names of materials that are actually being used as bio-fuel in the form of alternative energy in the country as on 31st January, 2006;

(b) the names of materials together with their quantity permitted to be used for blending with diesel and petrol;

(c) whether any actual benefit has been derived out of these alternatives; and

(d) if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI VILAS MUTTEMWAR): (a) and (b) Bio-fuel includes all types of fuel resources derived from the biological world. Internationally, bio-ethanol and bio-diesel are considered as bio-fuels that can substitute or blend with petroleum based fuels. Bio-ethanol is produced mainly from sugar molasses in India. Bio-diesel can be produced from edible and non-edible oils. In India non-edible oil seeds are preferred route for production of bio-diesel. These include, among others, Jatropha curcas and Pongamia pinnata, etc. 5% blending of

† Original notice of the question was received in Hindi.

ethanol is permitted in gasoline as per Bureau of Indian Standards specification, IS: 2796-2000. Also 5% blending of bio-diesel is permitted in petro-diesel as per Bureau of Indian Standards specification, IS 1460-2004.

(c) and (d) Trials carried out by various organizations in India have brought out that the blending of bio-fuels with petroleum based fuels results in reduction in emissions particularly, carbon monoxide, hydrocarbons and particulates. Besides, bio-fuels being renewable energy resources contribute to energy security.

Electrification of remote areas

1816. SHRI R.K. ANAND: Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:

(a) whether the Common Minimum Programme of Government envisages electrification of all household by 2009;

(b) if so, the steps taken for electrification of 24,418 remote villages and remote hamlet where grid electricity is unlikely to reach by the end of the Eleventh Five Year Plan period; and

(c) the funds allocated for the same?

THE MINISTER OF STATE OF THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI VILAS MUTTEMWAR): (a) Yes, Sir.

(b) A programme for electrification through non-conventional energy sources of remote unelectrified census villages and unelectrified hamlets of electrified census villages is being implemented by the Ministry. Earlier, those unelectrified census villages where grid was unlikely to reach by the end of the 11th Plan were to be taken up under this programme. The number of such villages was tentatively estimated at 24418 on the basis of information provided by the states. After the initiation of the Rajiv Gandhi Grammen Vidyutikaran Yojana by the Ministry of Power, only those villages/hamlets where grid connectivity is either not feasible or not cost effective will be covered under the programme. The task of identification of such villages has been entrusted to the Rural Electrification Corporation who has so far identified 2029 villages in 13 states.